DATA SHEET

AMN1220 OLT
OPTICAL LINE TERMINAL

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AMN1220

High-performance GPON solution supports multiple residential and commercial Fiber-To-The-Premises applications

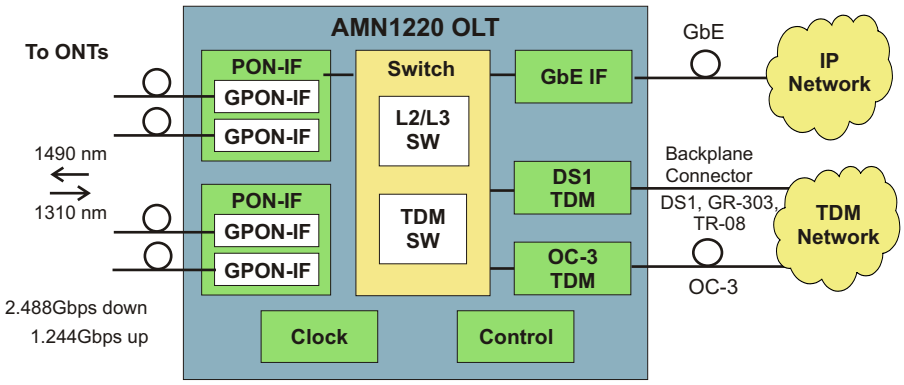
The AMN1220 GPON FTTP system is designed around Hitachi's own internally-developed ASICs and GPON optics. The AMN1220 is compliant with ITU-T G.984 standards, including GEM (GPON Encapsulation Mode). GEM allows native transport of TDM circuits (DS1, OC-3) and Ethernet transport of data.

The AMN1220 OLT provides a full complement of FTTP functions, distributing triple play services to up to 1,024 subscribers per OLT at a 1:32 split ratio (expandable to up to 2,048 at a 1:64 split). With increased usage of the AMN1220 GMT ONT, the maximum number of subscribers per OLT can exceed 12,000. The AMN1220 features a built-in Layer 2/3/TDM switch fabric, available in 24Gbps or 48Gbps versions. Up to 96Gbps of capacity (2 x 48Gbps) can be provided.

Highlights

- Dense design
  - Up to 96 PON interfaces per 7-foot equipment bay
  - Integrated switch fabric on OLT shelf
- Robust bandwidth management
  - Per-flow QoS and bandwidth control
  - VLAN support (translation/transparent transport)
  - Full suite of traffic management functions
  - Integrated IGMP
  - Scalable switching capacity (24G, 48G, 96G)
- Redundancy
  - 1:1/1+1 for controller, clock, switch, TDM and voice gateway interfaces
  - Link aggregation for Ethernet
- Economical growth path - populate ½ of shelf, add second set of switch and PON-IF circuit packs as needed
- Network/Trunk side interfaces
  - GbE with pluggable optics (upgradeable to 10GbE)
  - DS1 TDM and voice gateway with GR-303 and TR-08 support (redundant)
  - OC-3 TDM with pluggable optics (redundant)

AMN1220 OLT Block Diagram



AMN1220 OLT

Specifications

Item		Specification
Optical interface (between OLT and remote ONT)	Transmission method	FSAN Standard GPON (ITU-T G.984.1, G.984.2, G.984.3, G.984.4)
	Transmission speed (max.)	Downstream: 2.488Gbps Upstream: 1.244Gbps
	Logical speed (per user)	10/100/1000Mbps
	Bandwidth Management	Bandwidth can be set in 64K increments across the PON interface
	Connection cable	Single-mode optical fiber
	Connector	SC-PC
	Wavelength	Downstream: 1490nm Upstream: 1310nm
	Transmission distance	20 km max.
	Transmit/Receive characteristics, Class B optics:	Tx launch power: +5dBm min; +9dBm max Rx min. sensitivity: -28dBm; min overload -7dBm
	Transmit/Receive characteristics, Class B+ optics:	Tx launch power: +1.5dBm min; +5dBm max Rx min. sensitivity: -28dBm; min overload -8dBm
	Number of lines	32 max per OLT shelf (2 per PON IF card)
	Number of branches (users)	32 max per line (1,024 per OLT)
Network interface, GbE	Physical interface	1000BASE-SX/LX/ZX
	Connector	LC (SFP)
	Number of interfaces	16 max (4 per GbE card x 4 cards)
Network Interface, TDM (DS1)	Physical interface	1.544Mbps (DS1)
	Connector	Champ 28
	Number of interfaces	112 max (28 per circuit pack x 4)
	Voice protocol support	GR-303/TR-08 (optional)
Management interface	Protocol	TL-1
	Interface	10BASE-T
	Connection cable	UTP CAT-5
	Connector	RJ-45
	Number of ports	4
	Serial interfaces	2 RS232C
Power	Power Supply	-40.5 to –57.5 VDC
	Power Consumption	1336W max
Cooling		Fan
Physical dimensions	External (W x D x H)	22.7 in. x 23.0 in. x 10.2 in. 577mm x 584mm x 260mm
	Rack mounting	23” rack mountable, 3 per 7’ bay
	Weight	107.8 lb (49 kg) max.
Environmental	Operating temperature	5° to 40° C 41° to 104° F
	Humidity	5 to 85% RH, no condensation
Compliance		UL, FCC, NEBS

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